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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/737,118	12/17/2003	Yasuhiko Matsunaga	U2054.0147	6044

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EXAMINER	
MILORD, MARCEAU	
ART UNIT	**PAPER NUMBER**
2618	

DATE MAILED: 09/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/737,118	MATSUNAGA, YASUHIKO	
	Examiner	Art Unit	
	Marceau Milord	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-46* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-46* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1- 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takao et al (US Patent No 6871071 B2) in view of Patel et al (US Patent No 6522628 B1).

Regarding claims 1-6, Takao et al discloses a radio resource management method (figs. 1-3) comprising the control steps of: detecting the occurrence of interference between service areas provided by plural radio base stations;(col. 3, line 44- col. 4, line 16; col. 8, line 33) and controlling transmission power of a radio base station for interference suppression in response to said occurrence of interference between service areas provided by plural radio base stations (col. 9, line 42- col. 10, line 55; col. 11, line 65; col. 19, line 8- col. 20, line 45).

However, Takao et al does not specifically disclose the steps of controlling transmission power of a radio base station for interference suppression in response to said occurrence of interference between service areas provided by plural radio base stations; detecting the

occurrence of interference based on radio link quality information notified from each of said radio base stations, wherein said radio link quality information comprises at least a radio link reception level; and wherein said control step comprises the step of controllably reducing the transmission power of a radio base station, of which a reception level exceeds a predetermined threshold value and a current transmission power is more than a lower limit value, of radio base stations using the same frequency as a frequency currently used by said radio base station.

On the other hand, Patel et al, from the same field of endeavor, discloses a method and system for managing transmission resources in a wireless communications network that includes receiving a packet and determining a time duration for transmission of the packet. A power level for transmission of the packet over the time duration is further determined. Based on the time duration and the power level, a wireless resource impact is determined for the packet. Transmission resources are allocated based on the wireless resource impact (col. 2, lines 20-61; col. 3, lines 13-33). Furthermore, the transmission sector token bucket may include transmission resources for the entire sector or for one of a plurality of flow groups within the sector. Each disparate sector token bucket may comprise transmission resources for the entire sector or may be a supplementary token bucket dedicated to providing transmission resources to packet transmissions in other sectors where each two-dimensional token bucket is sized based on the average data rate, burst rate, transmission power, interference characteristic or other suitable parameter of a corresponding flow or groups of flows at an associated location (col. 5, lines 7-38; col. 7, lines 20-50;col. 11, line 42- col. 12, line 23; col. 14, lines 16-42). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Patel to the communication system of Takao for the purpose of allocating

transmission resources in a wireless network in order to effectively police, shape and control traffic flows.

Regarding claims 7-32, Takao et al discloses a radio base station in a radio communication system, said radio communication system including plural radio base stations each which provides a service area and a radio resource management apparatus for managing radio resources of said radio base stations ;(col. 3, line 44- col. 4, line 16; col. 8, line 33), comprising: means for measuring a radio link quality and then notifying a radio resource management apparatus of radio link quality information being a measurement result (col. 9, line 42- col. 10, line 55; col. 11, line 65; col. 19, line 8- col. 20, line 45).

However, Takao et al does not specifically disclose the features of a means for responding transmission power control issued from said radio resource management apparatus and then controllably changing transmission power, to suppress interference between service areas detected based on said measurement result in said radio resource management apparatus; wherein said notification means performs a notification operation at predetermined notification intervals, wherein when said radio link quality exceeds a predetermined threshold value, said notification interval is set longer than said threshold value, wherein when a distribution value of a radio link quality measured within a fixed period exceeds a predetermined threshold value, said notification interval is set longer than said threshold value.

On the other hand, Patel et al, from the same field of endeavor, discloses a method and system for managing transmission resources in a wireless communications network that includes receiving a packet and determining a time duration for transmission of the packet. A power level for transmission of the packet over the time duration is further determined. Based on the time

duration and the power level, a wireless resource impact is determined for the packet. Transmission resources are allocated based on the wireless resource impact (col. 2, lines 20-61; col. 3, lines 13-33). Furthermore, the transmission sector token bucket may include transmission resources for the entire sector or for one of a plurality of flow groups within the sector. Each disparate sector token bucket may comprise transmission resources for the entire sector or may be a supplementary token bucket dedicated to providing transmission resources to packet transmissions in other sectors where each two-dimensional token bucket is sized based on the average data rate, burst rate, transmission power, interference characteristic or other suitable parameter of a corresponding flow or groups of flows at an associated location (col. 5, lines 7-38; col. 7, lines 20-50;col. 11, line 42- col. 12, line 23; col. 14, lines 16-42). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Patel to the communication system of Takao for the purpose of allocating transmission resources in a wireless network in order to effectively police, shape and control traffic flows.

Regarding claims 33-40, Takao et al discloses a radio terminal (figs. 1-3) comprising: means for measuring a radio link quality and then notifying a radio resource management apparatus of radio link quality information being the measurement result (col. 9, line 42- col. 10, line 55; col. 11, line 65; col. 19, line 8- col. 20, line 45).

However, Takao et al does not specifically disclose the features of a means for responding distributed control indication for a load being a radio terminal accommodated in a radio base station, based on said radio link quality information, wherein said notifying means performs a notifying operation at predetermined notification intervals, wherein when a radio link

quality exceeds a predetermined threshold value, said notification interval is set longer than that in the case of less than said threshold value, wherein when a distribution value of a radio link quality measured within a fixed period exceeds a predetermined threshold value, said notification interval is set longer than that in the case of less than said threshold value.

On the other hand, Patel et al, from the same field of endeavor, discloses a method and system for managing transmission resources in a wireless communications network that includes receiving a packet and determining a time duration for transmission of the packet. A power level for transmission of the packet over the time duration is further determined. Based on the time duration and the power level, a wireless resource impact is determined for the packet. Transmission resources are allocated based on the wireless resource impact (col. 2, lines 20-61; col. 3, lines 13-33). Furthermore, the transmission sector token bucket may include transmission resources for the entire sector or for one of a plurality of flow groups within the sector. Each disparate sector token bucket may comprise transmission resources for the entire sector or may be a supplementary token bucket dedicated to providing transmission resources to packet transmissions in other sectors where each two-dimensional token bucket is sized based on the average data rate, burst rate, transmission power, interference characteristic or other suitable parameter of a corresponding flow or groups of flows at an associated location (col. 5, lines 7-38; col. 7, lines 20-50;col. 11, line 42- col. 12, line 23; col. 14, lines 16-42). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Patel to the communication system of Takao for the purpose of allocating transmission resources in a wireless network in order to effectively police, shape and control traffic flows.

Regarding claims 41-45, Takao et al discloses a computer readable program (figs. 1-3), that operably controls a radio base station in a radio communication system, said radio communication system including plural radio base stations each providing a service area and a radio resource management apparatus for managing radio resources of said radio base stations (col. 3, line 44- col. 4, line 16; col. 8, line 33), comprising the steps of: measuring a radio link quality and then notifying said radio resource management apparatus of radio link resource information being a measurement result (col. 9, line 42- col. 10, line 55; col. 11, line 65; col. 19, line 8- col. 20, line 45).

However, Takao et al does not specifically disclose the steps of responding transmission power control produced from said radio resource management apparatus and thus controlling a change of transmission power, to suppress interference between service areas detected based on the measurement result in said radio resource management apparatus; the control step of responding occurrence of interference between plural service areas and controlling transmission power, to suppress interference autonomously.

On the other hand, Patel et al, from the same field of endeavor, discloses a method and system for managing transmission resources in a wireless communications network that includes receiving a packet and determining a time duration for transmission of the packet. A power level for transmission of the packet over the time duration is further determined. Based on the time duration and the power level, a wireless resource impact is determined for the packet. Transmission resources are allocated based on the wireless resource impact (col. 2, lines 20-61; col. 3, lines 13-33). Furthermore, the transmission sector token bucket may include transmission resources for the entire sector or for one of a plurality of flow groups within the sector. Each

disparate sector token bucket may comprise transmission resources for the entire sector or may be a supplementary token bucket dedicated to providing transmission resources to packet transmissions in other sectors where each two-dimensional token bucket is sized based on the average data rate, burst rate, transmission power, interference characteristic or other suitable parameter of a corresponding flow or groups of flows at an associated location (col. 5, lines 7-38; col. 7, lines 20-50;col. 11, line 42- col. 12, line 23; col. 14, lines 16-42). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Patel to the communication system of Takao for the purpose of allocating transmission resources in a wireless network in order to effectively police, shape and control traffic flows.

Regarding claim 46, Takao et al discloses a computer readable program (figs. 1-3) for executing the operation of a radio terminal by means of a computer, comprising the steps of: measuring a radio link quality and notifying a radio resource management apparatus of the radio link quality information being the measurement result (col. 9, line 42- col. 10, line 55; col. 11, line 65; col. 19, line 8- col. 20, line 45).

However, Takao et al does not specifically disclose the steps of responding a distributed control indication of a load based on said radio link quality information, said dispersion control being created from said radio resource management apparatus, said load being a radio terminal accommodated.

On the other hand, Patel et al, from the same field of endeavor, discloses a method and system for managing transmission resources in a wireless communications network that includes receiving a packet and determining a time duration for transmission of the packet. A power level

for transmission of the packet over the time duration is further determined. Based on the time duration and the power level, a wireless resource impact is determined for the packet. Transmission resources are allocated based on the wireless resource impact (col. 2, lines 20-61; col. 3, lines 13-33). Furthermore, the transmission sector token bucket may include transmission resources for the entire sector or for one of a plurality of flow groups within the sector. Each disparate sector token bucket may comprise transmission resources for the entire sector or may be a supplementary token bucket dedicated to providing transmission resources to packet transmissions in other sectors where each two-dimensional token bucket is sized based on the average data rate, burst rate, transmission power, interference characteristic or other suitable parameter of a corresponding flow or groups of flows at an associated location (col. 5, lines 7-38; col. 7, lines 20-50;col. 11, line 42- col. 12, line 23; col. 14, lines 16-42). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Patel to the communication system of Takao for the purpose of allocating transmission resources in a wireless network in order to effectively police, shape and control traffic flows.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marceau Milord whose telephone number is 571-272-7853. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew D. Anderson can be reached on 571-272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MARCEAU MILORD

Marceau Milord
Primary Examiner
Art Unit 2618